

**ABSTRACT**

The present invention discloses and claims a fill system and method for reducing the chemical concentration gradient in absorbent materials. The fill system includes a source of liquid connected to a nozzle for dispensing the liquid into a container. The nozzle includes a dispersal face that defines primary apertures approximately equidistant from the outer perimeter and center point on the dispersal face. The nozzle may also include secondary apertures proximate to the outer perimeter and one or more tertiary apertures proximate to the center point. The dispersal of fluid through the secondary or tertiary apertures may be less approximately one-half of the dispersal of fluid through the primary apertures.